Poster session 3
PS3:68

Ethylene glycol poisoning presenting with a falsely elevated lactate level

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Introduction: A patient presenting with a metabolic acidosis with a high anion gap has a limited differential diagnosis. Beside suspicion for poisoning, lactate acidosis is the most common cause and is easily documented by using a blood gas analyser. Case report: A 19-year-old man, in previous good health, was found lying in bed with decreased consciousness of unknown origin. His room was littered with furniture and several empty cans of soft drinks. On admission, no signs of shock were present, but a respiratory rate of 40/min with increased minute volume was observed. Blood pressure was 185/95 mmHg, heart rate was 110 beats per minute and his body temperature was normal. The rest of the physical examination was unremarkable A blood gas analysis showed a pH of 6.99, pCO2 of 6.5 mmHg, HCO3 of 1.5 mmol/L and a lactate of > 30 mmol/L. As the unexpected lactic acidosis had no clinical explanation, other causes of metabolic acidosis were further examined. An osmolal gap of 31 mmol/kg H2O and a plasma lactate level measured in the lab of only 3.2 mmol/L with an anion gap of 37 mmol/L directed the diagnosis to an intentional poisoning. The ethylene glycol level at the time of admission was 1.1 g/L. The initial urinalysis also revealed the presence of oxalate crystals. Conclusions: The discrepancy between the point-of care (POC) lactate level and the plasma lactate level was attributed to different methods of measuring. Interference on the POC analyzer was caused by ethylene glycol metabolites as already limited reported in the literature. Given the fact that nowadays there is an increased use of POC analysers, one should be aware of possible false readings since they use different methods of measuring compared to clinical chemistry analysers.